

ABSTRACT

Photosensitive cells each includes a photodiode (1), a transfer gate (2), a floating diffusion layer portion (3), an amplifying transistor (4), and a reset transistor (5). Drains of the amplifying transistors (4) of the photosensitive cells are connected to a power supply line (10), and a pulsed power supply voltage (VddC) is applied to the power supply line (10). Here, a low-level potential (VddC_L) of the power supply voltage has a predetermined potential higher than zero potential. Specifically, by making the low-level potential (VddC_L) higher than channel potentials obtained when a low level is applied to the reset transistors (5), or channel potentials obtained when a low level is applied to the transfer gates (2), or channel potentials of the photodiodes (1), a reproduced image with low noise is read.